

Kennecott
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Cindy S. Emmons
Director, Environmental Affairs

M/035/002

Wayne

Kennecott

January 22, 1992

RECEIVED

JAN 29 1992

DIVISION OF
OIL GAS & MINING

Mr. Lowell Braxton
Division of Oil, Gas, and Mining
355 West North Temple
III Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Subject: Environmental Actions for the Butterfield Waste Rock
Relocation Project

Dear Mr. Braxton:

Attached is a copy of the Administrative Order on Consent for removal action and the supporting work plan, submitted to the U.S. Environmental Protection Agency Region VIII, for the Butterfield Waste Rock Relocation Project.

The work plan details the scope and procedures for removal, transport, and deposition of the Butterfield Waste Rock. The work plan does not address revegetation of the site, so an additional attachment describing the agronomic practice that will be employed and the final reclamation seed mix is also enclosed.

This project involves removing mine waste rock from the Butterfield Creek Channel and banks and relocating the material to a suitable permanent repository. Kennecott will undertake this project to address EPA and State concerns with potential problems posed by this material.

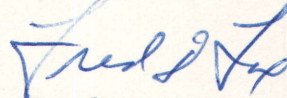
Please review the attached information concerning the environmental plans. Kennecott is providing this material because it is interested in your observations and comments with regard to the work plan.

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Preparatory work is currently underway to install storm drains, construct haul roads and service roads, and finalize various design work. Final grading and revegetation is anticipated for the Fall of 1993.

Please contact me at 569-6555, if you would like to discuss this project in further detail.

Sincerely,

A handwritten signature in blue ink, appearing to read "Fred Fox", with a stylized flourish at the end.

Fred Fox
Director, Environmental Affairs

DD:dbw

Agronomic procedures used will include tilling and drill seeding, broadcast seeding by hand and/or hydroseeding. A 16-16-8 fertilizer will be applied at a rate of 250 pounds per acre. Depending upon terrain, fertilizer will be applied by a spreader pulled by a tractor, by hand broadcast, or as a component of the hydroseeding application. Organic matter or mulch will not be applied except as an integral component of the hydroseeding, if utilized. Tilling and drill seeding will be accomplished using a tractor pulling a suitable tilling/seeding implement. Depth of drilling will be a maximum 1 1/2 inches. Broadcast seeding by hand or hydroseeding will be utilized on steeper slopes. The seed mixture to be used is:

TABLE 1

FINAL RECLAMATION SEED MIX

Species	Rate* (lbs./acre)
<u>Grasses</u>	
<u>Agropyron dasystachyum</u> (thickspike wheatgrass)	2.0
<u>Agropyron intermedium</u> (intermediate wheatgrass)	2.0
<u>Agropyron smithii</u> (western wheatgrass)	2.0
<u>Agropyron trachycaulum</u> (slender wheatgrass)	1.5
<u>Agropyron trichophorum</u> (pubescent wheatgrass)	2.0
<u>Oryzopsis hymenoides</u> (indian ricegrass)	1.0
<u>Forbs</u>	
<u>Achillea millefolium</u> (yarrow)	.1
<u>Aster Chilensis</u> (Pacific aster)	.1
<u>Hedysarum boreale utahensis</u> (Utah Sweetvetch)	1.0
<u>Linum lewisii</u> (Lewis flax)	.5
<u>Medicago sativa</u> ('Ranger' alfalfa)	1.0
<u>Melilotus officianalis</u> (yellow sweetclover)	1.0
<u>Penstemon strictus</u> (Rocky Mountain penstemon)	.2
<u>Shrubs</u>	
<u>Purshia tridentata</u> (antelope bitterbrush)	2.0
<u>Cowania mexicana stansburiana</u> (Stansbury cliffrose)	.1
<u>Artemisia tridentata tridentata</u> (big Sagebrush)	2.0
<u>Chrysothamnus nauseosus</u> (rubber rabbitbrush)	.5

Total Seed

*Rate is in terms of Pure Live Seed (PLS) for drill seeding only.
The rate for broadcast seeding is double the drill rate.